

## PATENT COOPERATION TREATY



## PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT  
(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference P13331/MA		<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/EP 03/12879	International filing date (day/month/year) 14.11.2003	Priority date (day/month/year) 16.12.2002	
International Patent Classification (IPC) or both national classification and IPC G10L13/04			
Applicant SONY ERICSSON MOBILE COMMUNICATIONS AB et al.			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 4 sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>			
Date of submission of the demand  19.06.2004		Date of completion of this report  29.03.2005	
Name and mailing address of the International preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer  Dobler, E  Telephone No. +49 89 2399-6048  	

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/EP 03/12879**

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*):

**Description, Pages**

1-8 as originally filed

**Claims, Numbers**

1-38 received on 09.09.2004 with letter of 09.09.2004

**Drawings, Sheets**

1/1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-38
	No: Claims	
Inventive step (IS)	Yes: Claims	1-38
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-38
	No: Claims	

- 2. Citations and explanations**  
**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1 Reference is made to the following documents:

D1: US 2002/034956 A1 (MEKURIA FISSEHA) 21 March 2002 (2002-03-21)

D2: WO 01/57851 A1 (FREELAND) 9 August 2001 (2001-08-09)

2.1 The document D1 is regarded as being the closest prior art to the subject-matter of independent claim 1, and shows (the references in parentheses applying to this document):

"An apparatus having a display for showing various readable data, comprising a control unit arranged to extract readable data for sending to a device for generating speech from the extracted data, the speech generating device being attachable to the apparatus."  
(*paragraph [0026] in D1*)

The subject-matter of claim 1 differs from this in that "the control unit is arranged to extract a part of the readable data from the display and sending it to the speech generating device"

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

2.2 The problem to be solved by the present invention may be regarded as to enhance the user friendliness of the apparatus.

The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

Although D2 discloses "a control unit which is arranged to extract a part of the readable data from the display and sending it to the speech generating device" (*page 27, lines 14 to 28 in D2*), the speech generating device of D2 is not attachable to the apparatus. Moreover, there is no hint in D1 why the skilled person would include the teaching of D2 in the apparatus of D1.

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2.3 Claims 2-19 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

3.1 The document D1 is regarded as being the closest prior art to the subject-matter of independent claim 20, and shows (the references in parentheses applying to this document):

"An apparatus having a display for showing various readable data, comprising a control unit and a device for generating speech comprising a conversion circuit for converting data to a speech signal and connectable to a speaker system." (*paragraph [0026] in D1*)

The subject-matter of claim 20 differs from this in that "the control unit is arranged to extract a part of the readable data from the display for sending to the speech generating device."

The subject-matter of claim 20 is therefore new (Article 33(2) PCT).

3.2 The problem to be solved by the present invention may be regarded as to enhance the user friendliness of the apparatus.

The solution to this problem proposed in claim 20 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

Although D2 discloses "a control unit which is arranged to extract a part of the readable data from the display and sending it to the speech generating device", the speech generating device of D2 is not comprised by the apparatus. Moreover, there is no hint in D1 why the skilled person would include the teaching of D2 in the apparatus of D1.

3.3 Claims 21-36 are dependent on claim 20 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

3.4 Claims 37-38 claim a computer program product achieving the functionality of the apparatus in accordance with any of claims 20 to 36, and as such also meet the requirements of the PCT with respect to novelty and inventive step.

## CLAIMS

1. An apparatus (1) having a display (2) for showing various readable data, comprising a control unit arranged to extract readable data for sending to a device (5) for generating speech from the extracted data, the speech generating device (5) being attachable to the apparatus (1), characterised in that the control unit is arranged to extract a part of the readable data from the display (2) and sending it to the speech generating device (5).
2. An apparatus according to claims 1, characterised in that the control unit is arranged to send said extracted part of the readable data, such as a line or a word, at a time, automatically to the speech generating device (5) at a fixed or controllable rate.
3. An apparatus according to claims 1 or 2, characterised in that the control unit is arranged to send said extracted part of the readable data, such as a line or a word, at a time, to the speech generating device (5) in dependence of scrolling in the display (2).
4. An apparatus according to claims 1, 2 or 3, characterised in that the readable data includes texts from menus, text messages, help information, calendars or confirmation of actions taken with the apparatus (1).
5. An apparatus according to claims 1, 2, 3 or 4, characterised in that the control unit is arranged to send said extracted part of the readable data, such as a line or a word, at a time, to the speech generating device (5) in dependence of inputting characters to the apparatus.
6. An apparatus according to claims 5, characterised in that the control unit is arranged to send readable data as triggered by the input of definite characters, such as letters, signs, spaces or punctuation marks.
7. An apparatus according to any one of claims 1 to 6, characterised in that the control unit is arranged to extract readable data from a selected file and sending it automatically to the speech generating device (5) at a fixed or controllable rate.
8. A device (5) for generating speech, characterised by:  
a microcontroller (6), connectable to an apparatus according to any one of claims 1 to 7, for receiving data from said apparatus to be converted to speech,

and sending the data to a conversion circuit (7);  
a conversion circuit (7) connectable to a speaker system (9) for converting the data to a speech signal.

- 5 9. A device according to claim 8, characterised in that the data is supplied as ASCII characters.
10. A device according to claim 8 or 9, characterised in that the conversion circuit (7) supports various selectable languages.
- 10 11. A device according to claim 10, characterised in that the conversion circuit (7) is capable of downloading languages via the connected apparatus.
12. A device according to any one of claims 8 to 11, characterised in that the  
15 conversion circuit (7) supports various selectable voices.
13. A device according to claim 12, characterised in that the conversion circuit (7) is capable of downloading voices via the connected apparatus (1).
- 20 14. A device according to any one of claims 8 to 13, characterised in that the speed of the speech signal is adjustable.
15. A device according to any one of claims 8 to 14, characterised in that the microcontroller (6) is connectable to a memory containing language  
25 information, such as various languages, abbreviation lists and dictionaries.
16. A device according to any one of claims 8 to 15, characterised in that the microcontroller (6) is connectable to a memory containing voice settings.
- 30 17. A device according to any one of claims 8 to 16, characterised in that the microcontroller (6) is connectable to the apparatus (1) by means of a system connector having an interface (10) for audio signals, serial channels, power leads and analog and digital ground leads.
- 35 18. A device according to claims 17, characterised in that the device is implemented as a functional cover, comprising a shell covering the front of the apparatus (1) and a microprocessor cooperating with the processor of the apparatus (1).

19. A device according to any one of claims 8 to 18, characterised in that the connectable apparatus (1) is a portable telephone, a pager, a communicator or an electronic organiser.
- 5 20. An apparatus (1) having a display for showing various readable data, comprising a control unit and a device for generating speech comprising a conversion circuit for converting data to a speech signal and connectable to a speaker system (9; 11), characterised in that the control unit is arranged to extract a part of the readable data from the display (2) for sending to the speech  
10 generating device (5).
21. An apparatus according to claim 20, characterised in that the control unit is arranged to send said extracted part of the readable data, such as a line or a word, at a time, automatically to the speech generating device (5) at a fixed or  
15 controllable rate.
22. An apparatus according to claims 20 or 21, characterised in that the control unit is arranged to send said extracted part of the readable data, such as a line or a word, at a time, to the speech generating device (5) in dependence of scrolling  
20 in the display (2).
23. An apparatus according to claims 20, 21 or 22, characterised in that the readable data includes texts from menus, text messages, help information, calendars or confirmation of actions taken with the apparatus (1).  
25
24. An apparatus according to claims 20, 21, 22 or 23, characterised in that the control unit is arranged to send said extracted part of the readable data, such as a line or a word, at a time, to the speech generating device (5) in dependence of inputting characters to the apparatus.  
30
25. An apparatus according to claims 24, characterised in that the control unit is arranged to send readable data as triggered by the input of definite characters, such as letters, signs, spaces or punctuation marks.
- 35 26. An apparatus according to any one of claims 20 to 25, characterised in that the control unit is arranged to extract readable data from a selected file and sending it automatically to the speech generating device (5) at a fixed or controllable rate.



27. An apparatus according to any one of claims 20 to 26, characterised in that the speaker system (11) is integrated with the apparatus.
28. An apparatus according to any one of claims 20 to 27, characterised in that the data is supplied as ASCII characters.
29. An apparatus according to any one of claims 20 to 28, characterised in that the conversion circuit supports various selectable languages.
30. An apparatus according to claim 29, characterised in that the apparatus (1) is capable of downloading languages.
31. An apparatus according to any one of claims 20 to 30, characterised in that the conversion circuit supports various selectable voices.
32. An apparatus according to claim 31, characterised in that the apparatus (1) is capable of downloading voices.
33. An apparatus according to any one of claims 20 to 32, characterised in that the speed of the speech signal is adjustable.
34. An apparatus according to any one of claims 20 to 33, characterised in that the apparatus (1) is connectable to a memory containing language information, such as various languages, abbreviation lists and dictionaries.
35. An apparatus according to any one of claims 20 to 34, characterised in that the apparatus (1) is connectable to a memory containing voice settings.
36. An apparatus according to any one of claims 1 to 7 and 20 to 35, characterised in that the apparatus is a portable telephone, a pager, a communicator or an electronic organiser.
37. A computer program product loadable into the internal memory of an apparatus (1) having a display for showing various readable data, characterised by comprising software code portions to achieve the functionality of the apparatus in accordance with any one of claims 20 to 36.
38. A computer program product according to claim 37, embodied on a computer readable medium.